

Gemini Valve B.V.

Zijperstraat 29, 1823CX Alkmaar
Netherlands
Tel.: +31(0) 161-227.909
Mobile: +316 1358 2578

info@geminivalve.nl
www.geminivalve.nl
GV417



Stainless steel overflow valve

MAIN CHARACTERISTICS

The 417 valve is intended for the discharge of fluids overflow when an upstream limitation of pressure is looked for, for example downstream to a pump. This valve also works in presence of downstream pressure allowing to operate in a loop. The standard construction is body and bonnet stainless steel, and disc FPM or PTFE. The functioning of the valve 417 is in proportional opening. The pressure of beginning of opening can be set with means of an outside screw which can be if necessary sealed.

AVAILABLE MODELS

F type : angle pattern design.

Y type : Y pattern in-line design.

Type 417F (Sealing FPM) : G 3/8" to G 2"

Type 417YF (Sealing FPM) : G 3/8" to G 1"

Type 417P (Sealing PTFE) : G 3/8" to G 2"

Type 417YP (Sealing PTFE) : G 3/8" to G 1"

BSP Screwed end connections.

Pressure range FPM : 0,5-2,5 bar / 2-12 bar (Version 417F and 417YF)

Pressure range PTFE : 0,5-2,5 bar / 2-12 bar / 12-20 bar (Version 417P)

Pressure range PTFE : 0,5-2,5 bar / 2-12 bar (Version 417YP)

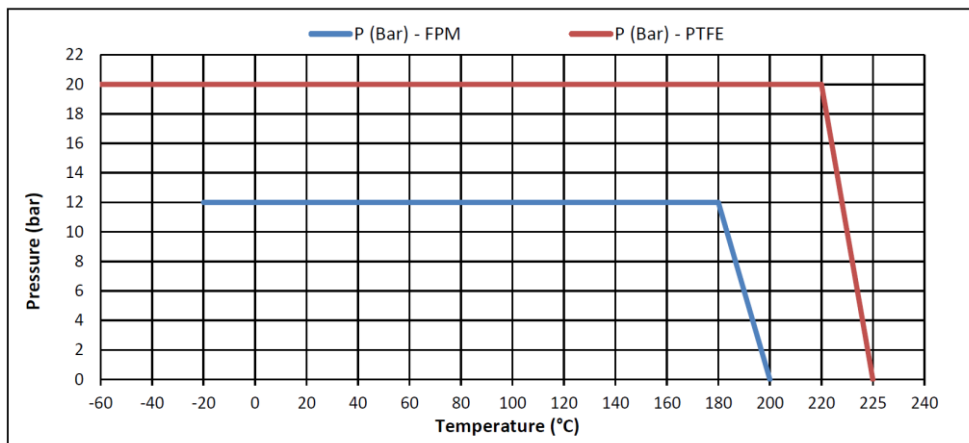


Sur demande

Lloyd's
Register
PED/2014/68/UE

LIMITS OF USE

Max allowed fluid pressure : PS	0,5 - 20 bar	
Max allowed fluid temperature : TS	FPM	PTFE
	-20 °C / +200 °C	-60 °C / +225 °C



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REGULATIONS AND STANDARDS OF CONSTRUCTION

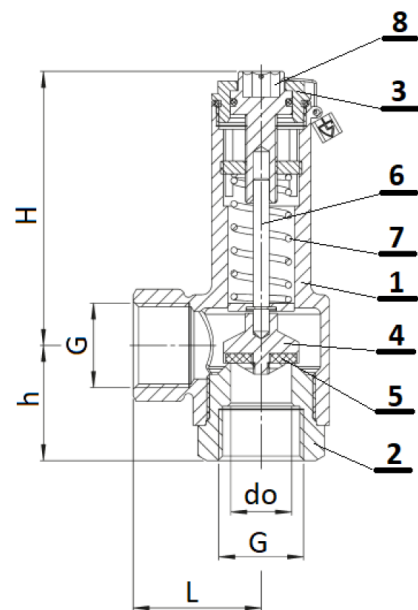
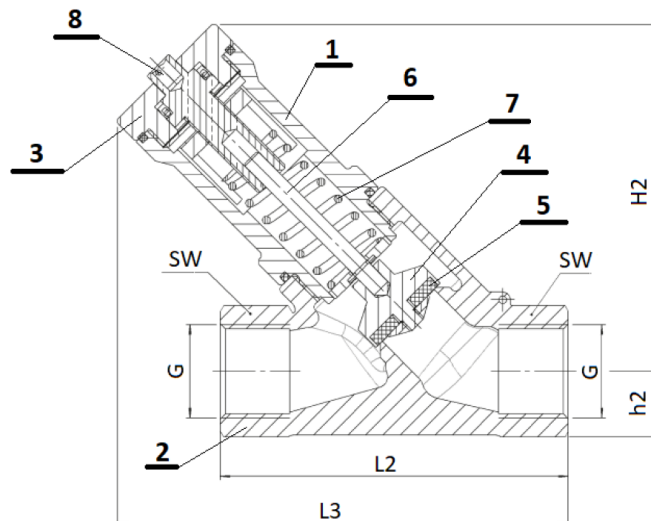
Item	Standard	ON
Pressure Equipment Directive 2014/68	<u>3/8" to 1"</u> : A4 § 3 excluded	
	<u>1"1/4 to 2"</u> : category III	0036
Stainless steel materials	EN 1503-4	
BSP thread	ISO 228	

DIMENSIONS (mm) AND CONNECTIONS

DN (G)	L	L2	L3	H	H2	h	h2	do	SW	Weight (kg)
G 3/8"	30	69	85,2	60	65	29	11,8	10	22	0,3
G 1/2"	34	72	87,2	69	65	33	13,8	13	27	0,4
G 3/4"	40	90	116,5	86	90	36	16,5	19	31	0,7
G 1"	46	95	131,4	101	103,5	48	20,8	25	41	1,2
G 1" 1/4	50	-	-	118	-	52	-	30	-	1,9
G 1" 1/2	61	-	-	139	-	60	-	38	-	2,5
G 2"	67	-	-	149	-	66	-	50	-	3,8

CONSTRUCTION

N°	Item	Material
1	Body	Stainless steel 1.4404
2	Nozzle	Stainless steel 1.4408
3	Cover	Stainless steel 1.4408
4	Disc	Stainless steel 1.4404
5	Seal	FPM/PTFE
6	Axis	Stainless steel 1.4404
7	Spring	Stainless steel 1.4310
8	Adjusting screw	Stainless steel 1.4404



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FLOWRATE OF DISCHARGE FOR AIR

FLOW COEFFICIENT (Kv) in Nm3/h for an overtaking pressure of 1 bar																					
DN	G 3/8"			G 1/2"			G 3/4"			G 1"			G 1" 1/4			G 1" 1/2			G 2"		
Pressure range	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20
bar																					
0,5	83			147			209			375			717			847			1376		
1	95			158			228			390			808			899			1546		
1,5	101			173			257			433			901			1033			1734		
2	111	48		180	86		287	159		462	302		977	233		1104	426		1904	788	
2,5	119	50		202	89		306	168		495	311		1031	257		1205	447		1953	802	
3		51			95			188			322			272			481			821	
4		62			101			213			341			311			527			878	
5		80			105			242			361			352			566			942	
6		90			111			250			380			397			597			994	
7		96			118			257			391			437			764			1050	
8		114			117			314			347			492			910			1123	
9		115			123			324			301			546			949			1187	
10		122			133			331			288			600			1023			1280	
11		121			138			339			274			569			1070			1358	
12		126	96		138	112		354	221		261	305		538	594		1095	682		1480	1237
13			109			103			206			291			625			758			1277
14			116			94			166			282			656			834			1388
15			120			85			140			269			687			911			1489
16			122			76			132			257			716			987			1609
17			124			57			115			245			737			954			1821
18			129			56			84			233			758			922			2033
19			134			44			50			220			779			889			2245
20			140			36			45			208			801			851			2357

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FLOWRATE OF DISCHARGE FOR WATER

FLOW COEFFICIENT (Kv) in (m3/h) for an overtaking pressure of 1 bar																					
DN	G 3/8"			G 1/2"			G 3/4"			G 1"			G 1" 1/4			G 1" 1/2			G 2"		
Pressure range	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20
bar																					
0,5	2,7			4,3			6,1			10,8			16,0			21,7			31,6		
1	3,0			4,6			6,5			11,9			16,7			23,3			35,6		
1,5	3,2			4,8			6,7			12,6			17,5			24,0			37,7		
2	3,4	1,6		5,0	1,8		6,9	3,7		13,0	4,2		18,1	6,2		25,2	8,8		40,6	17,9	
2,5	3,7	1,7		5,2	1,8		7,3	3,8		13,7	4,3		18,9	6,2		26,1	9,1		43,0	19,4	
3		1,9			1,8			4,1			4,3			6,1			9,3			21,1	
4		2,2			1,7			4,6			4,5			6,1			9,7			24,7	
5		2,5			1,6			5,1			4,6			6,0			10,3			28,9	
6		2,8			1,5			6,1			4,7			5,9			10,6			30,1	
7		2,9			1,5			6,5			5,0			5,8			11,9			31,7	
8		3,1			1,4			7,1			5,1			5,6			13,1			34,2	
9		3,2			1,4			7,3			5,3			5,5			14,3			37,5	
10		3,4			1,4			8,3			5,5			5,3			15,7			39,3	
11		3,5			1,4			9,1			5,8			5,2			17,2			42,4	
12		3,7	1,7		1,3	0,4		9,3	2,8		5,9	2,2		5,0	6,8		17,6	10,1		43,9	18,9
13			1,4			0,4			2,4			2,2			6,5			10,3			21,2
14			1,3			0,5			2,2			1,9			6,3			10,5			24,1
15			1,1			0,5			1,7			1,6			6,1			10,6			25,7
16			0,8			0,5			1,4			1,3			6,0			10,9			27,6
17			0,6			0,5			1,1			1,1			5,8			11,0			29,3
18			0,4			0,6			0,9			1,0			5,6			11,3			31,8
19			0,2			0,6			0,7			0,8			5,1			11,4			34,6
20			0,2			0,6			0,7			0,7			5,0			11,5			36,6

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FLOWRATE OF DISCHARGE FOR TEAM

FLOW COEFFICIENT (Kv) in (kg/h) for an overtaking pressure of 1 bar																					
DN	G 3/8"			G 1/2"			G 3/4"			G 1"			G 1" 1/4			G 1" 1/2			G 2"		
Pressure range	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20
bar																					
0,5	65			113			163			295			509			665			1100		
1	74			125			181			313			553			724			1222		
1,5	81			135			200			345			615			798			1345		
2	86	40		143	73		221	126		373	218		642	194		862	311		1451		
2,5	93	45		157	79		235	141		384	244		619	218		940	349		1535	663	
3		43			80			156			258			223			387			698	
4		52			79			160			308			244			428			670	
5		66			82			176			322			283			455			740	
6		75			88			200			326			323			518			859	
7		81			93			198			298			363			635			816	
8		89			96			190			279			402			645			916	
9		89			98			193			250			441			707			1015	
10		97			106			192			273			480			770			1002	
11		94			106			189			262			472			833			1090	
12		101	79		105	78		204	183		282	247		406	457		814	570		1179	987
13			84			68			174			189			489			610			1056
14			90			57			162			201			521			650			1125
15			95			54			123			213			552			590			1022
16			94			51			130			180			584			728			1261
17			99			46			110			142			615			768			1140
18			96			32			87			150			576			693			1399
19			101			28			61			105			604			606			1678
20			105			21			32			165			632			634			1537

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MOUNTING

- 1 - Carry out pressure adjustment with hexagonal key. Turning clockwise increases pressure. Turning anticlockwise decreases pressure. The valves can be set when backpressure prevails or when medium is flowing through the valve. The setting can be secured by means of a seal.
- 2 - Tighten counter-nut.

USE

- 1 - To ensure a satisfactory operation of the valves they must be assembled in such a way that the safety valve is not exposed to any impermissible static, dynamic or thermal loads.
- 2 - The installation has to be flushed before installing the valve. If an installation is not sufficiently cleaned or the valve is installed improperly, the valve may leak even the first time it responds.
- 3 - Appropriate safety measures must be taken at the place of installation of the valves if the medium that discharges upon actuation of the valve can lead to direct or indirect hazards to people or the environment. In particular, it is advised to channel the exit.
- 4 - The stainless overflow and pressure control valve type 417 can be installed in any position. The function of the valves is guaranteed in every position.
- 5 - During assembly always make sure not to apply any force when fastening the connecting thread and not to screw it in too far, as this could otherwise damage the seat of the valve. Do not allow sealing material such as hemp or Teflon to penetrate into the valve.



MAINTENANCE

The operating pressure of the plant is to be at least 5% lower than the closing pressure of the valve if it is used as a pressure limiting valve. In this way, the valve can satisfactorily close again after blowing off. If this does not remove the leak the valve has to be overhauled. After long periods of non-use the function of the valve must be tested.